

## WEST Search History

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DATE: Friday, January 20, 2006

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<input type="checkbox"/>	L10	L9 and @pd<19980911	140
<input type="checkbox"/>	L9	L8 and arthrobacter\$	346
<input type="checkbox"/>	L8	Trehalose or Ergot sugar or Mycose or Trehaose	13380
<input type="checkbox"/>	L7	L6 or L5 or L4 or L3 or L2 or L1	33672
<input type="checkbox"/>	L6	(536/23.2)!.ccls.	13917
<input type="checkbox"/>	L5	(530/350)!.ccls.	17988
<input type="checkbox"/>	L4	(435/252.1)!.ccls.	1796
<input type="checkbox"/>	L3	(435/243)!.ccls.	1368
<input type="checkbox"/>	L2	(435/193)!.ccls.	2081
<input type="checkbox"/>	L1	(435/183)!.ccls.	5096

END OF SEARCH HISTORY

=> d his

(FILE 'HOME' ENTERED AT 18:37:11 ON 20 JAN 2006)

L1 FILE 'REGISTRY' ENTERED AT 18:37:28 ON 20 JAN 2006  
1 S 170780-49-1/RN

FILE 'HCAPLUS' ENTERED AT 18:38:02 ON 20 JAN 2006

L2 FILE 'REGISTRY' ENTERED AT 18:38:05 ON 20 JAN 2006  
SET SMARTSELECT ON  
SEL L1 1- CHEM : 5 TERMS  
SET SMARTSELECT OFF

L3 FILE 'HCAPLUS' ENTERED AT 18:38:05 ON 20 JAN 2006  
63 S L2  
L4 10 S L3 (L) (ARTHROBACTER)  
L5 6 S L4 AND PD<19980911

=> d

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 170780-49-1 REGISTRY  
ED Entered STN: 01 Dec 1995  
CN Glucosylmutase, (1→4)-α-D-glucan 1-α-D- (9CI) (CA  
INDEX NAME)

OTHER NAMES:

CN (1→4)-α-D-Glucan 1-α-D-glucosylmutase  
CN E.C. 5.4.99.15  
CN Maltooligosyltrehalose synthase  
CN Synthase, maltooligosyltrehalose  
MF Unspecified  
CI MAN  
SR CA  
LC STN Files: AGRICOLA, BIOSIS, CA, CAPLUS, TOXCENTER, USPATFULL

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

58 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
58 REFERENCES IN FILE CAPLUS (1907 TO DATE)



ENZYME: 5.4.99.15

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1-70

**Entry** EC 5.4.99.15 Enzyme

**Name** (1->4)-alpha-D-glucan 1-alpha-D-glucosylmutase;  
malto-oligosyltrehalose synthase;  
maltodextrin alpha-D-glucosyltransferase

**Class** Isomerases  
Intramolecular transferases (mutases)  
Transferring other groups

**Sysname** (1->4)-alpha-D-glucan 1-alpha-D-glucosylmutase

**Reaction** 4-((1->4)-alpha-D-glucosyl)n-1-D-glucose =  
1-alpha-D-((1->4)-alpha-D-glucosyl)n-1-alpha-D-glucopyranoside  
[RN:R01824 R06243]

**Substrate** 4-((1->4)-alpha-D-glucosyl)n-1-D-glucose

**Product** 1-alpha-D-((1->4)-alpha-D-glucosyl)n-1-alpha-D-glucopyranoside

**Comment** the enzyme from *Arthrobacter* sp., *Sulfolobus acidocaldarius* acts on (1->4)-alpha-D-glucans containing three or more (1->4)-alpha-linked D-glucose units. Not active towards maltose.

**Reference** 1 [PMID:8534970]  
Maruta K, Nakada T, Kubota M, Chaen H, Sugimoto T, Kurimoto M, Tsujisaka Y.  
Formation of trehalose from maltooligosaccharides by a novel enzymatic system.  
Biosci. Biotechnol. Biochem. 59 (1995) 1829-34.  
2 [PMID:8611744]  
Nakada T, Maruta K, Tsusaki K, Kubota M, Chaen H, Sugimoto T, Kurimoto M, Tsujisaka Y.  
Purification and properties of a novel enzyme, maltooligosyl trehalose synthase, from *Arthrobacter* sp. Q36.  
Biosci. Biotechnol. Biochem. 59 (1995) 2210-4.  
3 [PMID:9063973]  
Nakada T, Ikegami S, Chaen H, Kubota M, Fukuda S, Sugimoto T, Kurimoto M, Tsujisaka Y.  
Purification and characterization of thermostable maltooligosyl trehalose synthase from the thermoacidophilic archaebacterium *Sulfolobus acidocaldarius*.  
Biosci. Biotechnol. Biochem. 60 (1996) 263-6.

**Other DBs** CAS: 170780-49-1

LinkDB

[All DBs](#)